Weekly Summary Report
USEPA Oversight, Sauget Area 2, Sauget, IL
WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday, October 8, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from October 1 through October 8, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of site preparation, backfill, trench cleanout, and cap construction.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
PSI (geotechnical testing subcontractor)
Layne Western (contractor for well maintenance)
Aerotek (air monitoring subcontractor)
URS (primary consultant for Solutia)

Work Performed This Week

Work at the site continued with backfill and cleanout activities on the open trench segment located in the northern portion of Site R. Capping construction and grading activities were performed in the southern portion of Site R.

Cleanout activities continued with the Liebherr 853 hydraulic clamshell performing cleanout on six days during the reporting period. By the end of the week, the remaining open trench extended to approximately 1,033 feet in length.

Excavation activities were estimated to be nearly 100 percent complete by the end of the week, with backfill activities at approximately 76 percent complete.

Groundwater Migration Control System (GMCS)

The river elevation dropped slightly during the week, lowering from 384.40 feet above mean sea level (amsl) on October 1 to 383.29 feet amsl on October 8. The combined flow rate of the extraction well system averaged approximately 2,000 gallons (gpm) for most of the week, with two shut-down periods during the week to accommodate pump maintenance activities. The pump in EW2 was replaced on Monday by Layne Western. During the replacement, wells EW1 and EW3 were turned off.

Eight barrier wall piezometers, with four inside and four outside the barrier wall alignment, monitored the groundwater elevations adjacent to the barrier wall alignment during the week. Table 1 shows the river and piezometer water elevations measured on October 8, 2004 (1:00 PM). The barrier wall has been constructed adjacent to piezometer pairs P2, P3, and P4. In the vicinity of piezometer pair P1 (station 31+00), the trench has been excavated to total depth, with a portion of the trench backfilled and overlain with slurry.

During the reporting period (October 1 to October 8), two of the piezometer pairs (P1 and P4) showed an inward gradient, while the other two piezometer pairs (P2 and P3) showed

an outward gradient across the barrier wall. The water level elevations at piezometers located inside the wall at P1 and P4 varied between 0.1 and 1.0 feet lower than the water level at the corresponding piezometer located outside of the barrier wall. Water level elevations at piezometers P2 and P3 showed a difference of 0.2 and 1.0 feet between piezometers located inside and piezometers located outside the barrier wall. During the week, monitoring devices in Piezometers P3W and P1N were taken offline.

The monitoring device in Piezometer P1N was removed due to slurry being present in the well. The monitoring device in Piezometer P3W was removed during routine gauging and malfunctioned when it was reinserted. This device will be fixed next week, and the monitoring device in Piezometer P1N will be replaced in the near future.

The river level during the week remained higher than water levels in piezometers located on the inside of the barrier wall. The river level was generally between 1 and 3 feet higher than the water levels in the inside piezometers.

TABLE 1
River and Piezometer Water Elevations – October 8, 2004 (10:00)

	Elevation (ft above mean sea level)
River Level	383.29
Piezometer 1S – inside wall (northern-most pair)	380.61
Piezometer 1N – outside wall (northern-most pair)	NM
Piezometer 2E – inside wall (north-central pair)	382.33
Piezometer 2W – outside wall (north-central pair)	381.38
Piezometer 3E – inside wall (south-central pair)	381.54
Piezometer 3W – outside wall (south-central pair)	NM
Piezometer 4E – inside wall (southern-most pair)	381.94
Piezometer 4W – outside wall (southern-most pair)	383.19

NM = Not Measured – Piezometers 1N and 3W were taken out of service during the reporting period.

Stormwater

No stormwater activity occurred during the week

Barrier Wall Construction

Inquip has completed excavation of the open trench along the barrier wall alignment. As of October 8, the portion of trench that remains open extends from station 27+60 to station 37+93, approximately 1,033 feet in length.

The Liebherr 853 hydraulic clamshell completed the excavation but was onsite performing cleanout on six days during the reporting period. The Liebherr 855 mechanical clamshell is still onsite outside the exclusion zone, waiting to be demobilized. The Koehring 1266 trackhoe is also still onsite and is awaiting demobilization.

During the week, the depth of the open trench was measured daily. Table 2 summarizes the trench profile that was measured on the morning of October 8. On Graph 1, the current trench profile is depicted in comparison with the trench profile measured on October 1. Graph 2 shows the overall progress of the barrier wall construction.

Cap Construction

Inquip began cap construction this week by placing 5-millimeter polyethylene plastic sheeting and Tensar UX1400HS geogrid from approximately station 5+00 to station 12+00 along the barrier wall alignment, which had been previously excavated down to original grade. Inquip then tracked approximately two feet of work-pad material on top of the Tensar, placed a metallic tape marker and placed an additional material onto the trench in one-foot lifts. Each lift of work pad material was tracked in by a 750C bulldozer for compaction. By the end of the reporting period, the cap from station 5+00 to 12+00 was completed and rough graded, while capping activities continued from approximately station 13+00 to station 14+00.

Slurry

Approximately 10 tons of bentonite gel were used to mix fresh slurry on one day during the week. Fresh slurry, when pumped from the holding pond to the northern open trench segment near station 31+20, was tested frequently to assess its viscosity and adjusted with a blending pump using water from the fire hydrant, as necessary. The viscosity of the slurry was measured using a Marsh funnel, with results generally meeting the specification.

Slurry samples were collected from the top and the bottom of the trench daily and were tested for viscosity, density (unit weight), filtrate loss, pH and sand content. Analysis of trench slurry samples from the trench segment either met the specifications or satisfied the quality targets.

During the week, Inquip began pumping excess slurry from the open trench at station 37+93 to the temporary holding berm on top of the landfill.

Spoils Handling

During the week, spoils were transferred from locations adjacent to the open trench or from the temporary stockpile on top of the landfill to the backfill mix pad near station 27+60.

Backfill and Trench Cleaning

During the week, Inquip mixed and placed approximately 2,850 cubic yards of backfill material into the open trench. Backfill operations took place on six days during the reporting period.

The backfill spoils were mixed with approximately two percent of dry bentonite and slurry as necessary to meet quality specifications.

Backfill was tested this week for unit weight, slump and moisture content. The unit weight for backfill placed this week ranged from 126 to 133 pounds per cubic foot (pcf). Slump results averaged 4 inches and moisture content result ranged between 16.5 and 19.8 percent.

Tests on the backfill mixture to be conducted offsite by Mueser-Rutledge and Golder laboratories included permeability and gradation. Five gradation sample results were

available for review this week from samples taken September 15 through September 25. All samples passed specifications.

Other Activities

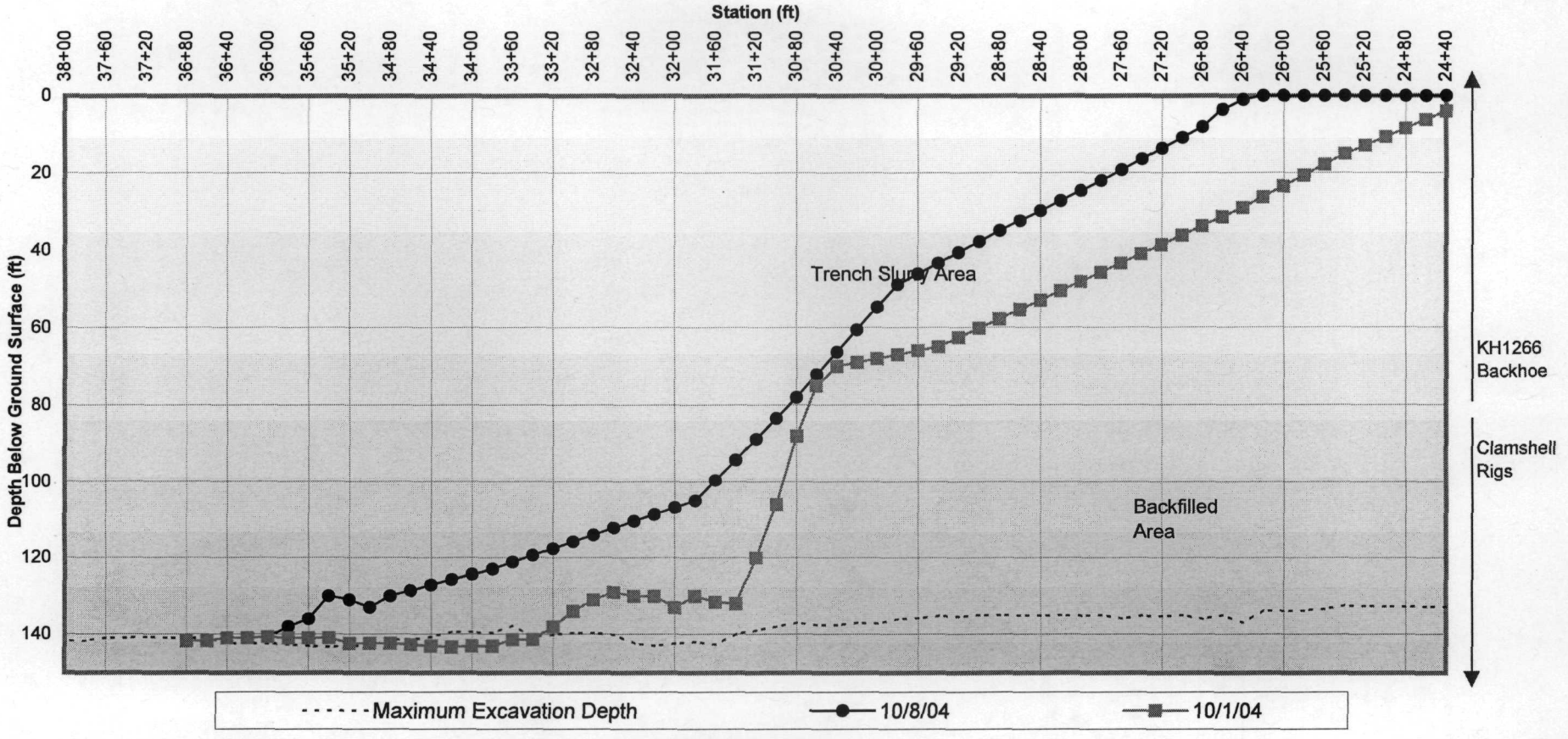
Aerotek performed the routine air monitoring conducted at Site R on six days during the reporting period. Layne Western was onsite on one day during the week replacing a faulty pump at well EW2.

Inquip placed approximately 2 feet of flowable fill (lean concrete) at the southeast corner of site R where the barrier wall intersects with Eagle Marines roadway (station 5+00). Before the flowable fill, was placed Inquip placed a layer of plastic sheeting and Tensar on top of the barrier wall. Two days after the flowable fill was placed Inquip placed crushed limestone gravel in the excavation. The excavation is currently backfilled to within 1 foot of finish grade.

TABLE 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench –October 1, 2004 7:00(AM)

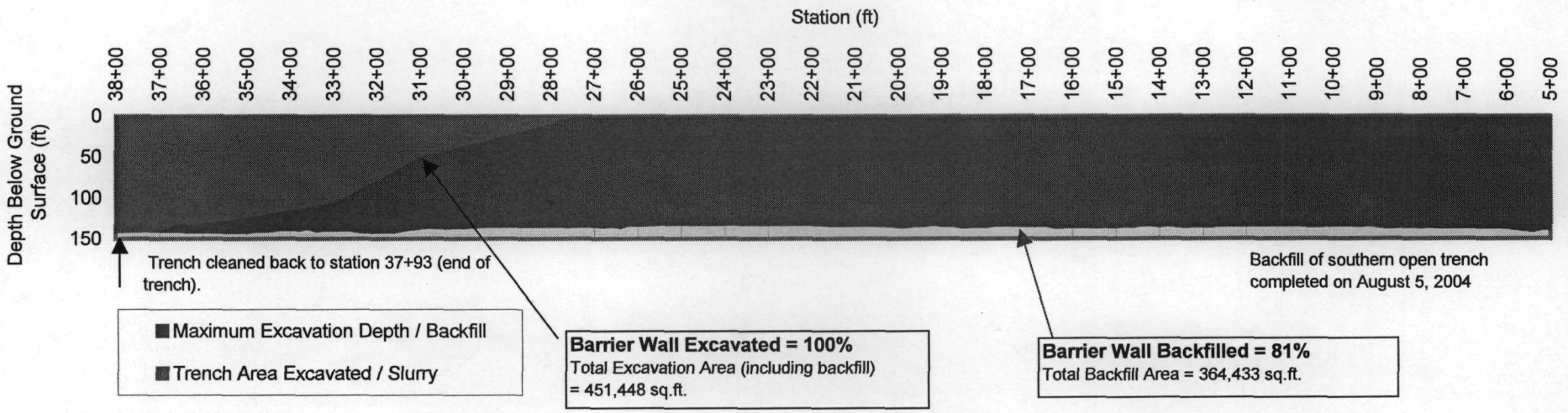
Station ID	Depth to bottom (ft below ground surface)
27+60	1
28+00	8
29+00	22
30+00	35
31+00	49
32+00	78
33+00	105
34+00	114
35+00	123
36+00	130
36+20	133
36+40	131
36+60	130
36+80	136
37+00	138
37+20	140
37+40	139
37+60	141
37+80	141
37+93	141

Graph 1 - Weekly Barrier Wall Construction Progress - Open Trench Segment
October 1 through October 8, 2004



Note: Data plotted for the week through measurements on 9/24/04 and 10/1/04.
Some data points are interpolated between the available data points where trench depths were read.

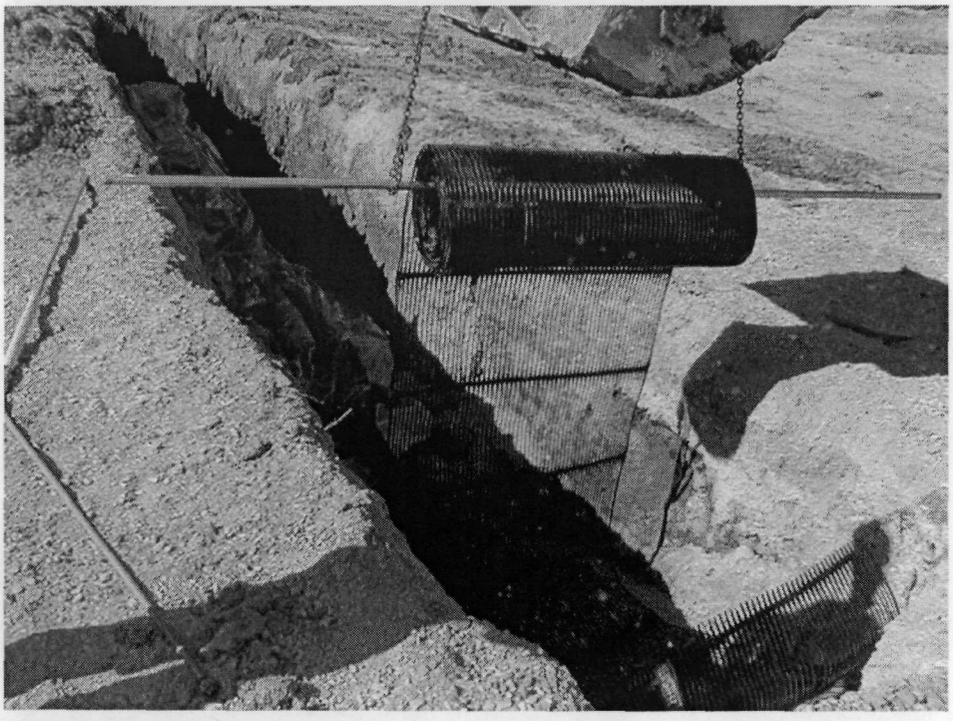
Graph 2 - Barrier Wall Construction Progress by October 8, 2004 (PM)



Note: Data plotted for the week through AM measurements on 10/8/04

Photos from the Week of October 8, 2004

Laying polyethylene plastic between top of backfill and cap material. (October 6, 2004)



Laying Tensar geogrid on top of polyethylene plastic sheeting before tracking in work pad material (October 6, 2004)